

**Appln No. 09/706,587**

**Amdt date September 20, 2004**

**Reply to Office action of June 18, 2004**

**REMARKS/ARGUMENTS**

Reconsideration of the above identified patent application is hereby requested. Claims 1 to 52 are now in the application. No claims have been cancelled or added. Claims 1, 12, 21, 33 and 43 have been amended to place them in better form for U.S. practice.

The Examiner alleges that the filing date for the Application will be given the date of the parent application 09/548,400, which is 4/13/00. Specifically, the Examiner alleges that the provisional applications 60/129,134, 60/136,685 and 60/160,124 fail to disclose anything related to the claims. However, the Applicants submit that the claimed invention is disclosed in the provisional application 60/129,134, filed on 4/13/99. Thus the present Application is entitled to the priority date of the provisional application 60/129,134, namely 4/13/99.

For example, Claim 1 of the present Application calls for, "A method of conditioning a composite signal, the composite signal being formed by introducing a first signal into a second signal, comprising adaptively filtering the first signal, detecting the second signal in the composite signal, controlling filter adaptation of the first signal as a function of the second signal detection and recovering the second signal from the composite signal using the adaptively filtered first signal, wherein filter adaptation of the first signal is capable of being disabled, before the second signal is recovered from the composite signal."

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Similarly, Paragraph 6 of the provisional application 60/129,134 discloses that, "The buffer B with size M provides a look-ahead M samples so that the adaptive filter freezes its taps M samples before the near-end signal reaches the summing junction". Fig. 1 also shows the look-ahead buffer positioned to freeze adaptation of the adaptive filter.

Accordingly, the Applicants submit that the provisional application 60/129,134, filed on 4/13/99, discloses halting adaptation of the first signal before the second signal is recovered from the composite signal, as well as providing a look-ahead capability to disable filter adaption before cancellation of the far end echo as detailed above, as per the current amended claims. Furthermore, the Applicants submit that the provisional application 60/129,134, filed on 4/13/99 discloses this information in a way that one of ordinary skill in the art could recognize that the Applicants invented what is claimed in the present Application.

Consequently, the Applicants respectfully request that the filing date for the present Application be given at least the filing date of the provisional application 60/129,134, namely 4/13/99.

The Examiner has rejected Claims 1-7, 10-16, 19-23, 26-29, 32-35, 38-39, 42-45, 48-49 and 52 under 35 U.S.C. §102(e) as being anticipated by Sih (U.S. Pat. No. 5,307,405) ("Sih").

The amended Claim 1 includes, among other limitations, "wherein filter adaptation of the first signal is capable of

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being disabled, before the second signal is recovered from the composite signal."

Sih does not disclose the above mentioned limitation. The Examiner states that the signal  $r(n)$  of Fig. 5 is equivalent to the composite signal of Claim 1. (Office action, p.3). However, this signal  $r(n)$  is shown in Fig. 5 directly coupled to the summer 148 which, according to the Examiner, is the point at which the second signal  $e(n)$  is recovered from the composite signal using the adaptively filtered first signal. (Id.)

Sih discloses that "the NEC 140 uses a variable adaptation threshold (denoted VT) to switch on and off the adaptation of echo canceller filter 160. The variable adaptation threshold (VT) is computed by variable adaptation threshold unit 186 and provided to state machine 180. The control algorithm permits echo canceller filter 160 to adapt if either of state filter 158 or echo canceller filter 160 has an ERLE greater than VT." (Sih, 13: 59-66). If this constitutes controlling the filter adaption of the first signal as a function of the second signal detection as the Examiner alleges, then this controlling process must necessarily take longer than the nearly instantaneous travel of the composite signal  $r(n)$  to the summer 148. The interaction of the signal  $r(n)$  with each of the components 150, 152, 156, 158 and 160 shown in Fig 5 each take a small fraction of time, perhaps a number of picoseconds, such that any effect produced by the components 150, 152, 156, 158 and 160, be it "controlling filter adaption" as the Examiner alleges or otherwise, must necessarily lag behind the effect produced by the summer 148 for a given signal  $r(n)$ .

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Sih discloses no structure such that "filter adaptation of the first signal is capable of being disabled, before the second signal is recovered from the composite signal", as currently claimed in Claim 1. Accordingly, the Applicants submit that Claim 1 is not anticipated by Sih under 35 U.S.C. §102(e). Claims 2-11 are dependent on Claim 1. As such, Claims 2-11 are believed allowable based upon Claim 1 and for the additional limitations contained therein.

The amended Claim 12 includes, among other limitations, "wherein disabling the filter adaptation includes providing a look-ahead capability to disable filter adaption, before cancellation of the far end echo."

For the same reasons as discussed above, Sih discloses no structure such that disabling the filter adaptation includes providing a look-ahead capability to disable filter adaption, before cancellation of the far end echo in the manner claimed in the present Claim 12. Accordingly, the Applicants submit that Claim 12 is not anticipated by Sih under 35 U.S.C. §102(e). Claims 13-20 are dependent on Claim 12. As such, Claims 13-20 are believed allowable based upon Claim 12 and for the additional limitations contained therein.

The amended Claim 21 includes, among other limitations, "wherein the logic is capable of disabling adaptation of the filter, before the second signal is recovered from the composite signal."

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For the same reasons as discussed above, Sih discloses no structure such that the logic is capable of disabling adaptation of the filter before the second signal is recovered from the composite signal in the manner claimed in the present Claim 21. Accordingly, the Applicants submit that Claim 21 is not anticipated by Sih under 35 U.S.C. §102(e). Claims 22-32 are dependent on Claim 21. As such, Claims 22-32 are believed allowable based upon Claim 21 and for the additional limitations contained therein.

The amended Claim 33 includes, among other limitations, "wherein the logic includes a look-ahead capability to disable filter adaption, before the difference operator cancels the far end echo."

For the same reasons as discussed above, Sih discloses no structure such that the logic includes a look-ahead capability to disable filter adaption, before the difference operator cancels the far end echo in the manner claimed in the present Claim 33. Accordingly, the Applicants submit that Claim 33 is not anticipated by Sih under 35 U.S.C. §102(e). Claims 34-42 are dependent on Claim 33. As such, Claims 34-42 are believed allowable based upon Claim 33 and for the additional limitations contained therein.

The amended Claim 43 includes, among other limitations, "wherein the logic means includes means for a look-ahead capability to disable the adaptation of the filter means, before the canceling means cancels the far end echo."

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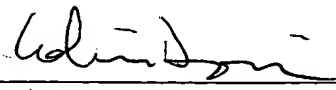
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For the same reasons as discussed above, Sih discloses no structure such that the logic means includes means for a look-ahead capability to disable the adaptation of the filter means, before the canceling means cancels the far end echo in the manner claimed in the present Claim 43. Accordingly, the Applicants submit that Claim 43 is not anticipated by Sih under 35 U.S.C. §102(e). Claims 44-52 are dependent on Claim 43. As such, Claims 44-52 are believed allowable based upon Claim 43 and for the additional limitations contained therein.

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested.

Respectfully submitted,  
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